FCC is to be commended for getting the DTV allotment "ball" rolling.

Subsequent to publication of the FCC's sixth FNPRM, it is apparent from industry reaction that there are differences in opinion concerning the planning factors and the proposed means to replicate existing service. With different planning factors, the proposed DTV allotment table will very likely change. It is imperative for the planning factors to be finalized in order to optimize the DTV allotment process. The following dLR comments are based on what has been proposed in the FCC's sixth FNPRM and information available at this time concerning DTV operations, with the foreknowledge that things will likely change.

It is this firm's opinion that if full accommodation and replication of existing NTSC service is the real goal for DTV, then all stations should return to their present NTSC channels for the final DTV operations. Returning to the current channel is the best means of insuring present coverage. It will involve less power, be more spectrum efficient, cause less interference, have less impact on LPTV service, and still permit the possible recapture of spectrum for other uses.

NTSC power is peak power, whereas, DTV power is average power. A "rule-of-thumb" for comparison is average power is about 25% of peak power. As is evident from a review of the FCC's proposed DTV allotment table, in-band DTV allotments have significantly lower power than the NTSC counterpart. In other words, if a station has its NTSC operation on a UHF channel and it is assigned a DTV UHF channel the DTV ERP is substantially less than the NTSC ERP. For example, the average NTSC ERP for all UHF stations which received a UHF DTV allotment is 2510 kW (34 dBk). The average UHF DTV ERP for these stations is 158.6 kW (22 dBk), or about one sixteenth the power (12 dB less).

For another in-band example from the FCC's proposed allotment table we looked at the NTSC operations on high VHF channels (7-13), which were allotted high VHF DTV channels. The average NTSC high VHF ERP is 244.4 kW (23.9 dBk) and the average DTV ERP is 5.7 kW (7.6 dBk) for these allotments.

However, out-of-band allotments involving NTSC VHF going to DTV UHF, encounter significantly higher power. This power increase results from the attempt to replicate VHF coverage. For instance, there are 270 low VHF NTSC assignments in the FCC's proposed DTV allotment table. The average NTSC ERP for these assignments is 87.4 kilowatts (kW). The average antenna HAAT is 433 meters (1420 feet). The FCC allotted high VHF DTV channels to 6 of these assignments, and UHF DTV channels to the remainder. The average DTV ERP for the 264 UHF allotments is 3521 kW.

There are 376 high VHF NTSC assignments in the FCC's proposed DTV allotment table. The average NTSC ERP for these assignments is 266 kW, and the average antenna HAAT is 433 meters (1420 feet). The FCC allotted low VHF DTV channels to 4 of these assignments, high VHF DTV channels to 57 of the assignments, and UHF DTV channels to the remainder. For the 315 UHF DTV channels, the average ERP is 1715 kW.

The average TV station going from a low VHF channel to a UHF DTV channel will require

its ERP to be increased from 87.4 kW (peak) to 3521 kW (average) in order to replicate the present coverage. The high VHF station going to a UHF DTV channel will require its ERP to be increased from 266 kW (peak) to 1715 kW (average) in order to replicate the present coverage.

From the above, it is evident that staying in-band will require less power. Going from a VHF channel to a UHF channel will require substantially more power to attempt to replicate existing service. A low VHF TV station will typically use a transmitter with a peak power rating of 20 to 25 kW for its current NTSC operation. In order to replicate its current service on a UHF DTV channel, this station will be required to employ a transmitter having a peak power rating of at least 550 kW. This is more than 20 times the station's current transmitter power rating.

In addition to the large transmitter expense, there will be significant costs for the waveguide and antenna systems to handle these large power levels. Furthermore, the operating costs for the proposed DTV facilities to replicate the current coverage will be substantially more than for the current NTSC operations.

If the stations remain on their current VHF channels for the final DTV operations after the transition, the power levels are much less. The average NTSC facilities noted above for the existing low VHF TV stations is an ERP of 87.4 kW (peak), and an antenna HAAT of 433 meters. The DTV ERP required to replicate the low VHF predicted NTSC Grade B contour with the noise limited 26.8 dBu f(50,90) contour is approximately 6.5 kW.

The average NTSC facilities noted above for the existing high VHF TV stations is an ERP of 266 kW (peak) and an antenna HAAT of 433 meters. The DTV ERP required to replicate the high VHF predicted NTSC Grade B contour with the noise limited 31.8 dBu f(50,90) contour is approximately 5.5 kW.

Not only are the power levels less for the final DTV operations being on the present channels, the present transmission line and antenna systems can be employed for the DTV operation. The only modification required will be to the transmitter system to reflect DTV instead of NTSC operation. In many cases it will be possible to modify the present transmitter.

It is the opinion of this firm that most, if not all, VHF broadcasters wish to remain on their current VHF channels for the final DTV operation. Although concerned about the impact of noise on low VHF DTV service, virtually all of the low VHF TV broad-casters communicating with this

firm have expressed the desire to remain on their current channel in lieu of being faced with the staggering cost of attempting to replicate existing service in the UHF band.

It is not practical to try and replicate superior VHF propagation characteristics with brute force UHF power. Based on the information available at this time, dLR believes the best way to fully accommodate and replicate all existing TV service is to use the existing channel. The final DTV operation on the current NTSC channel will be at significantly less power than the current NTSC operation, resulting in lower operating costs. With less power, there will be less interference on the channels, providing opportunities for improvement in service, or the addition of new or relocated stations. This method will also enable accommodation for currently ineligible assignments, plus the potential recovery of vacant non-commercial (and commercial) TV allotments. Overall, it seems to make the most sense for each station to remain on the present channel for the final DTV operation.

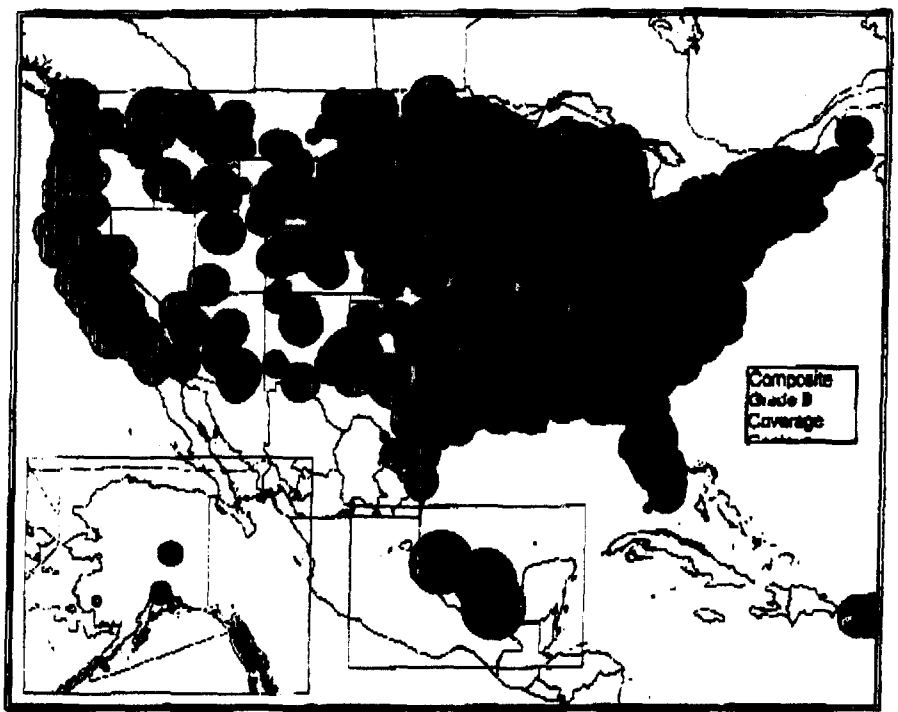

Figure 1 - Composite Licensed TV Grade B Coverage

The obvious questions are how to accommodate the transition from NTSC to DTV, and how to permit the FCC to recapture spectrum.

It is suggested that each station be assigned a second channel for DTV use during the transition period, similar to what has been proposed by the FCC in this proceeding. It is recommended that each station return to its current channel for the final DTV operation and ultimate DTV replication of its present NTSC coverage. For the transition, it is proposed that each station be authorized transmitting facilities for the proposed DTV channel based on replication of the station's current NTSC Grade A contour. The service within this NTSC contour is considered to represent the "heart" of each station's coverage.

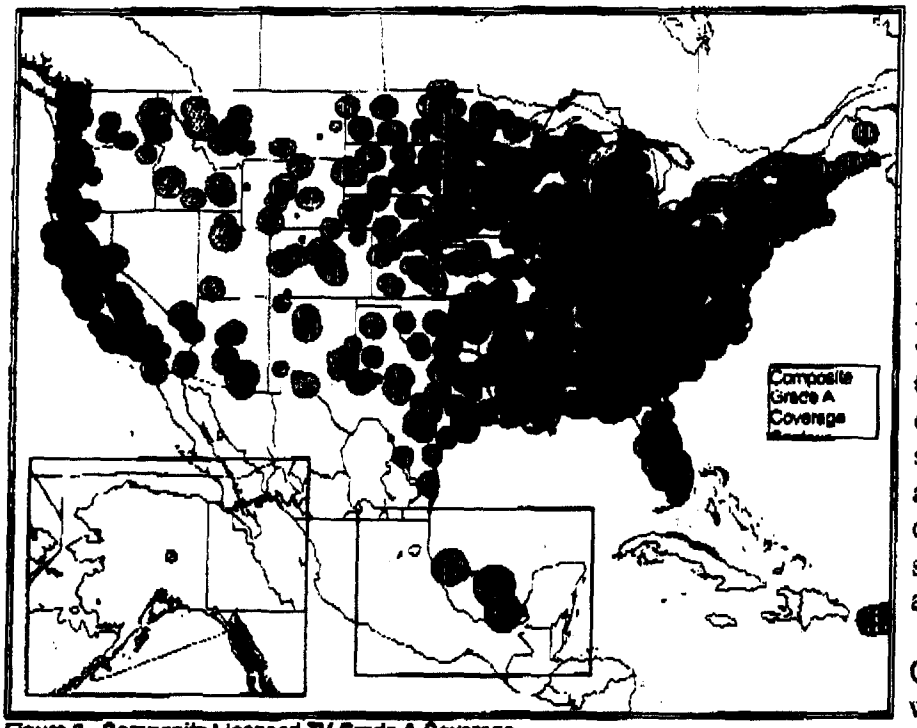

Figure 2 - Composite Licensed TV Grade A Coverage

Using the FCC's TV database, the extent of the predicted Grade A and Grade B contours were calculated for all licensed full service TV stations in the United States. The nominal ERP and antenna HAAT were used to determine the extent of the contours. Figure 1 shows the composite of all the licensed Grade B contours, and Figure 2 shows the composite of all the Grade A contours. The population (1990 Census) was estimated within the composite for each grade of service. Consideration was only given to the continental US, Alaska and Hawaii. Puerto Rico, the US Virgin Islands, Guam, and other US territories were not included. The following is a summary.

| TABLE I - ESTIMATED U.S. POPULATION WITHIN TV COVERAGE REGIONS | | |
|---|---|---|
| Region | Population | Percentage of Total |
| Total US | 248,709,873 | 100% |
| Composite Grade B | 246,530,215 | 99.1% |
| Composite Grade A | 236,468,230 | 95.1% |

Approximately 99% of the US population receives a Grade B signal, and 95% of the population receives a Grade A signal. If the interim DTV operations are based on replication of the stations NTSC Grade A service, then 95% of the US population would receive DTV service for the transition.

This seems to be a very reasonable approach for the transition period. Once sufficient DTV sets are in the public's hands, and TV set converters are readily available (both NTSC-to-DTV, and DTV-to-NTSC), then the stations will convert the current NTSC channels for DTV use. The DTV loaner channel can then be returned.

As noted above, the average NTSC ERP and antenna HAAT for the 270 low VHF assignments is 87.4 kW and 433 meters. For these transmitting facilities, the predicted Grade A (68 dBu) contour extends approximately 61.3 kilometers. To replicate the low VHF NTSC f(50,50) Grade A contour with the DTV noise limited f(50,90) 43.8 dBu contour requires a DTV

ERP of only 2.5 kW in the UHF band. This is substantially less than the 3521 kW required to replicate the existing NTSC Grade B service area.

The average NTSC ERP and antenna HAAT for the 376 high VHF assignments is 266 kW and 433 meters. The predicted Grade A (71 dBu) contour for these transmitting facilities extends approximately 71.8 kilometers. To replicate the high VHF NTSC f(50,50) Grade A contour with the UHF DTV noise limited f(50,90) 43.8 dBu contour requires a DTV ERP of only 14 kW in the UHF band. This power is significantly less than the 1715 kW required to replicate the existing NTSC Grade B coverage area.

Under the above procedure, it is obvious that much lower power is possible for the commencement and orderly transition from NTSC to DTV. Hence, there will be less interference among stations, and less impact on LPTV use. In addition the cost of the equipment to be used during the interim DTV transition period will be much more reasonable. Because of the modest facilities to be used for DTV during the transition, there will be less loading impact on towers.

The above suggestion for the transition to DTV service requires retention of the low VHF band (channels 2 through 6). In its sixth FNPRM the FCC proposes to recapture the low VHF spectrum for other uses since it feels the low VHF channels are less suitable because of the high level of atmospheric and man-made noise. This firm disagrees with the FCC's assessment for DTV use of low VHF channels, based on the information available at this time.

The September 1994 ("Field Test Results of the Grand Alliance HDTV Transmission Subsystem", September 16, 1994) and October 1995 ("Results of the Terrestrial Broadcast Transmission Field Tests of the Grand Alliance HDTV System Prototype", October 16, 1995) reports on the Charlotte, North Carolina DTV field tests do not conclude that low VHF channels are unsuitable for DTV use. The VHF observations made during the Charlotte tests were on channel 6. The VHF test was conducted at one-tenth NTSC power, or an NTSC peak ERP of 10 kW. The DTV power was conducted at one-sixteenth NTSC power, or an average ERP of 0.63 kW.

The reports indicate the channel 6 tests at Charlotte experienced unanticipated interference from : impulse noise, co-channel interference, cable system interference, and non-commercial educational (NCE) FM interference. The prevalence of the impulse noise was due to 60 Hz sources (AC power). The report stated : It is believed the impulse noise problem in Charlotte is atypical (emphasis added) and may not be representative of other areas.

The field test reports indicate that satisfactory NTSC VHF reception occurred at 39.6% of the locations. Satisfactory DTV VHF reception occurred at 81.7% of the locations, more than twice the satisfactory NTSC locations. In other words, DTV service was substantially better than NTSC, even at the low power level used. The DTV system performed significantly better than the NTSC system in the presence of impulse noise. Adding 6 dB of power (i.e., DTV ERP of 2.5 kW) improved the satisfactory reception from 82% to 94% of the locations. The reports indicate that if the DTV power for low VHF is increased 10 dB (i.e., DTV ERP of 6.3 kW), as expected for low VHF DTV operations, then the interfering sources would be substantially less effective in producing impairments.

The Charlotte report summarizes that because of the limited sample size and interference experienced, the low VHF results are inconclusive. The report suggests, and dLR agrees, that more field testing is desirable. However, the report states that DTV performs significantly better than NTSC at low VHF. It may be that more DTV power than has been initially anticipated at low VHF for DTV service will resolve the problem. The report does not conclude that low VHF is not suitable for DTV. It is believed that there is insufficient evidence for the FCC to conclude that the low VHF channels are unsuitable for DTV service.

dLR urges retention of the low VHF channels for TV use. dLR also recommends that additional field testing on the low VHF channels be conducted. Because of the superior propagation characteristics of the low VHF channels, and the potential ability to replicate existing NTSC service with an exceptional DTV service, it is believed the low VHF channels must be retained.

If for some reason, however, an existing low VHF NTSC station is already convinced that a UHF DTV channel is preferable then it can formally indicate this position to the FCC, accept its UHF DTV allotment, and state its intent to vacate the low VHF channel. We are sure there are existing UHF NTSC stations in the market willing to accept the risk of operating their DTV facilities on the low VHF channel.

With this approach for the proposed transition to DTV, high DTV power levels in the UHF band can be avoided. Less interference will be caused and received during the transition. With the improved interference performance of DTV, final DTV coverage on the existing channel will very likely be greater than current NTSC coverage. It will enable a more realistic and consistent maximum DTV ERP level for in-band assignments and future DTV development (such as 10 kW for low VHF, 30 kW for high VHF and 500 kW for UHF). It will provide more DTV allotment possibilities and enable the retention of vacant non-commercial allotments. It will have less impact on low power television (LPTV) facilities, and provide those LPTV stations which are displaced more opportunity for relocation. It will result in less risk of human exposure to radio frequency energy. It will enable the FCC to examine possibilities for relocating stations in the upper UHF band to recapture valuable spectrum. Spectrum in the upper UHF band is considered to be much more valuable to the communications industry than the low VHF spectrum. It is believed this process will be less costly for implementation of DTV because only modest (low powered) DTV facilities will be used for the interim transition. In addition, the modest DTV transition facilities will likely have much less impact on tower loading. The current NTSC transmission line and antenna systems can be employed for the final DTV operation with only modifications to the transmitter system.

In summary, dLR suggests an alternative method for transition to DTV. It disagrees with the FCC's assessment that low VHF channels are not suitable for DTV use and recommends retention of the low VHF channels (2 through 6) for TV use. dLR suggests that all stations return to their current channel for the final DTV operation, at which time full replication of existing NTSC coverage can be accomplished. It is proposed that a loaner channel for DTV use during the interim transition period be provided with transmitting facilities to replicate the station's NTSC Grade A contour.

dLR requests that the Commission consider a further extension of the Reply comment period in this proceeding not less than an additional 45 days in view of the complexity of these issues and the intervening holiday season. Also, due to the extraordinary nature of this proceeding, dLR requests that the Commission designate a formal period on which to file comments on Reply Comments.

Respectfully submitted,

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November 19, 1996

**ATTACHMENT 3**

Declaration of Brooke Spectorsky

DECLARATION

I, Brooke Spectorsky, hereby declare that the factual statements concerning WCPX(TV) contained in the foregoing "Petition for Partial Reconsideration of the Sixth Report and Order" are true and correct to the best of my knowledge and belief.

Executed on June 13th, 1997.

Brooke Spectorsky
President/General Manager
WCPX(TV)

CERTIFICATE OF SERVICE

I, Lawrence Roberts, hereby certify that I have, this 13th day of June, 1997, caused to be served by hand delivery, a true copy of the foregoing Petition for Partial Reconsideration of the Sixth Report and Order to the following:

Chairman Reed E. Hundt
Federal Communications Commission
1919 M Street, N.W., Room 814
Washington, DC 20554

Commissioner James H. Quello
Federal Communications Commission
1919 M Street, N.W., Room 802
Washington, DC 20554

Commissioner Rachelle B. Chong
Federal Communications Commission
1919 M Street, N.W., Room 844
Washington, DC 20554

Commissioner Susan Ness
Federal Communications Commission
1919 M Street, N.W., Room 832
Washington, DC 20554

Lawrence Roberts

Lawrence Roberts